

"Natural" Plasmas in NSTX

1. Inboard Limited ($R - a = 17.5\text{cm}$) Natural Divertors

- PF4 fixes $R + a = 153.3\text{cm}$, (sets the values of R and A).
- PF3 fixes the elongation, κ .
- Using currents in PF4 and PF3 alone lead to equilibria with a "natural triangularity" determined by the plasma profiles.

E.g., High / Low ℓ_i configs with $\kappa = 2.0$, $\beta_t = 25\%$, and $I_p = -1.0\text{MA}$

